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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/890,366	07/26/2001	Man Soo Choi	YPLEE7.001APC	1934
20995 7590 10/15/2007 KNOBBE MARTENS OLSON & BEAR LLP 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614			EXAMINER HOFFMANN, JOHN M	
			ART UNIT 1791	PAPER NUMBER
			NOTIFICATION DATE 10/15/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com
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Office Action Summary	Application No. 09/890,366	Applicant(s) CHOI ET AL.	
	Examiner John Hoffmann	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,10-14,17-21 and 32-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,10-14,17-21 and 32-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 10-14, and 17-21 and 32-38 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Examiner could find no support for the newly claimed limitations that has the creation of the nuclei and aggregates in the flame – wherein the temperature distribution in that flame was measured. Moreover, at page 11, lines 5-6 indicate that it is impossible to measure the temperature when making the particles. Whereas there is disclosure for measuring a flame distribution, and creating particles in a flame. There is nothing which suggests that they are the same flame. To one of ordinary skill, applicant probably shut off the flame after the temperature distribution measurements, and then created a new flame – this time with using the reactants to create the particles. It is noted that Examiner need not demonstrate that this is “probable”, rather examiner is merely setting forth a prima facie showing as to why there appears to be no support for the invention as now claimed. The burden is on applicant to demonstrate that the

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specification reasonably conveys that the inventors had possession of the generation of the particles in "the flame" that had its temperature distribution previously measured

Moreover, there is no indication that the wavelength was selected in the manner claimed. Given that applicant's CO2 laser is of a rather standard type, the less unreasonable assumption would be that applicant selected the aggregate size (or some other parameter) to coincide with the wavelength. (The Office's use of the phrase "less unreasonable" is NOT to be construed as an indication that such is in any way "reasonable.")

This is deemed to be a prima facie showing on failure to comply with the requirement. The burden is now on Applicant to show the requirement is complied with, or to amend the claims so that they comply.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 10-14, and 17-21 and 32-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As pointed out above, Examiner could not find support for creating the particles in "the flame" as required by claim 1. The heart of the problem could be phrased as: it is indefinite as to what is meant by "the flame" at lines 4 and 5. Examiner cannot figure out when is a flame a same flame and when is it another flame. Examiner notes it does

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not seem reasonable that one could avoid infringement of applicant's claim 1, merely by shutting off the flame and then creating a new flame between the first and second step. Yet, that is what the plain meaning of the supplying and forming steps of claim 1 seem to permit.

From MPEP 2111.01:

Plain Meaning

I. THE WORDS OF A CLAIM MUST BE GIVEN THEIR "PLAIN MEANING" UNLESS THEY ARE DEFINED IN THE SPECIFICATION

While the claims of issued patents are interpreted in light of the specification, prosecution history, prior art and other claims, this is not the mode of claim interpretation to be applied during examination. During examination, the claims must be interpreted as broadly as their terms reasonably allow. In re American Academy of Science Tech Center, **367 F.3d 1359, 1369, 70 USPQ2d 1827, 1834 (Fed. Cir. 2004)**< (The USPTO uses a different standard for construing claims than that used by district courts; during examination the USPTO must give claims their broadest reasonable interpretation.). This means that the words of the claim must be given their plain meaning unless applicant has provided a clear definition in the specification. In re Zletz, **893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989)** (discussed below); *Chef America, Inc. v. Lamb-Weston, Inc.*, **358 F.3d 1371, 1372, 69 USPQ2d 1857 (Fed. Cir. 2004)** (Ordinary, simple English words whose meaning is clear and unquestionable, absent any indication that their use in a particular context changes their meaning, are construed to mean exactly what they say. Thus, "heating the resulting batter-coated dough to a temperature in the range of about 400oF to 850oF" required heating the dough, rather than the air inside an oven, to the specified temperature.). One must bear in mind that, especially in nonchemical cases, the words in a claim are generally not limited in their meaning by what is shown or disclosed in the specification. See, e.g., *Liebel-Flarsheim Co. v. Medrad Inc.*, **358 F.3d 898, 906, 69 USPQ2d 1801, 1807 (Fed. Cir. 2004)**(discussing recent cases wherein the court expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment). It is only when the specification provides definitions for terms appearing in the claims that the specification can be used in interpreting claim language. In re Vogel, **422 F.2d 438, 441, 164 USPQ 619, 622 (CCPA 1970)**. See also *Superguide Corp. v. DirecTV Enterprises, Inc.*, **358 F.3d 870, 875, 69 USPQ2d 1865, 1868 (Fed. Cir. 2004)**

The independent claims indicate that the laser beam is "selected". This reads on a nebulous mental step conducted prior to the manipulative steps of the claimed process, hence rendering the present process claim unclear in meaning in scope. If

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applicant wishes to patent detail controls over the recited process, the process steps must be positively recited. See Seagram & Sons Inc. vs Marzall, 84 USPQ 180.

To look at it another way: it is unclear if one of ordinary skill can avoid infringement by merely choosing applicant's wavelength for some other reason, for example – to make lots of money.

Claim 1, line 15: there is no antecedent basis for “the actual laser absorption”.

It is unclear what is meant by having two the wavelength “coincide” with each other. See prior Office action.

Claim 1: line 9: there is no antecedent basis for “the effect”. The disclosure appears to refer to at least two effects: 1) heating and 2) coalescing – it is unclear which of the two this refers to.

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 10-14, 17-21 and 32-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamijo 4556416.

See the prior Office actions for the manner in which Kamijo is applied. It is noted that applicant appears to make no attempt to point out any patentable subject matter in the present claims.

As to the new measuring limitation:

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2144.05 [R-1] Obviousness of Ranges

See MPEP § 2131.03 for case law pertaining to rejections based on the anticipation of ranges under 35 U.S.C. 102 and 35 U.S.C. 102/103.

II. OPTIMIZATION OF RANGES

A. Optimization Within Prior Art Conditions or Through Routine Experimentation

Generally, differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) (Claimed process which was performed at a temperature between 40°C and 80°C and an acid concentration between 25% and 70% was held to be prima facie obvious over a reference process which differed from the claims only in that the reference process was performed at a temperature of 100°C and an acid concentration of 10%.);

It is well understood that temperature is result effective variable in nearly all reaction processes. Thus it would have been obvious to perform routine experimentation to determine the optimal temperature in the Kamijo flame. This would entail measurement of the temperature. Whereas the claim refers to "the temperature distribution", it is deemed that measuring the flame is measuring of the distribution at one location. That one location is part of the distribution. Applicant's figure 8B shows measurements at maybe 50 points – but this is not the same thing as measuring all points in the distribution – thus it does not appear that the claim requires measuring the temperature at all points. Applicant's 50 points give more useful information than just one point. But Examiner has no basis for interpreting the claim as requiring some minimal number of points of measurement - above one. If this interpretation for the limitation is unreasonable, then applicant should point out how many points would constitute a distribution, and how many would be too few (i.e. not read on the claims).

The deriving step would also be an obvious matter of routine experimentation to determine the optimal location for the laser. As to the “can be maximized” – it is noted that such is not a requirement that it is maximized, rather that, in theory it “can” be maximized if one so chooses. It is deemed that it is inherent that the aggregate absorption would be greater than the gas – this is because it is well understood that lasers pass through gases very efficiently, but are absorbed by solids very well. Clearly, if the laser gets absorbed by the gas in a very meaningful manner, the laser would be absorbed by the ambient before it gets to the particles – since air is mostly nitrogen which is an excess gas in the Kamijo process (col. 3, line 5).

As to the new dependent claims: these limitation would have been obvious for the same reasons the same limitations were obvious in other claims as indicated in prior Office actions. Again it is noted that applicant has made no indication that any limitation in these claims serve to define over Kamijo.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

As to the rejection based on “selected”: although applicant disagrees with Examiner's conclusion, no error is pointed out. Namely, the rejection indicates that one could select not for the purpose of “so as to be absorbed” but rather for the purpose “so as to make a lot of money”. One would not be able to tell what one's motivation is because a selecting step is a mental step. Applicant fails to address this point.

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Applicant does argue that the selection merely refers to the use of a laser having the necessary properties for being absorbed. Examiner disagrees. The claim nowhere requires the laser actually have those properties. Rather, the plain meaning is substantially that the artisan must select the wavelength under the belief that it will be absorbed. Compare to the nursery rhyme where Jack and Jill went up the hill so as to fetch a pail of water. Yet, they did not fetch water. Likewise one could select with some absorption property in mind – yet that property need not actually exist. This is why the courts caution that such is a nebulous mental step that has little meaning.

From MPEP 2111.01:

Plain Meaning

I. THE WORDS OF A CLAIM MUST BE GIVEN THEIR "PLAIN MEANING" UNLESS THEY ARE DEFINED IN THE SPECIFICATION

While the claims of issued patents are interpreted in light of the specification, prosecution history, prior art and other claims, this is not the mode of claim interpretation to be applied during examination. During examination, the claims must be interpreted as broadly as their terms reasonably allow. In re American Academy of Science Tech Center, **367 F.3d 1359, 1369, 70 USPQ2d 1827, 1834 (Fed. Cir. 2004)** (The USPTO uses a different standard for construing claims than that used by district courts; during examination the USPTO must give claims their broadest reasonable interpretation.). This means that the words of the claim must be given their plain meaning unless applicant has provided a clear definition in the specification. In re Zletz, **893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989)** (discussed below); *Chef America, Inc. v. Lamb-Weston, Inc.*, **358 F.3d 1371, 1372, 69 USPQ2d 1857 (Fed. Cir. 2004)** (Ordinary, simple English words whose meaning is clear and unquestionable, absent any indication that their use in a particular context changes their meaning, are construed to mean exactly what they say. Thus, "heating the resulting batter-coated dough to a temperature in the range of about 400oF to 850oF" required heating the dough, rather than the air inside an oven, to the specified temperature.). One must bear in mind that, especially in nonchemical cases, the words in a claim are generally not limited in their meaning by what is shown or disclosed in the specification. See, e.g., *Liebel-Flarsheim Co. v. Medrad Inc.*, **358 F.3d 898, 906, 69 USPQ2d 1801, 1807 (Fed. Cir. 2004)** (discussing recent cases wherein the court expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment). It is only when the specification provides definitions for terms appearing in the claims that the specification can be used in interpreting claim language. In re Vogel, **422 F.2d 438, 441, 164 USPQ 619, 622 (CCPA 1970)**. See also *Superguide Corp. v. DirecTV Enterprises, Inc.*, **358 F.3d 870, 875, 69 USPQ2d**

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1865, 1868 (Fed. Cir. 2004)

The plain meaning of "selected so as to" is deemed to be an intention.

As to the wavelengths that coincide, applicant argues that such is clear, but doesn't point out what that might mean. The specification indicates that the wavelength coincides with the wavelength band. This is clear – it means the wavelength is within the band. However, it is unclear what is meant by two wavelengths that coincide. Examiner does not understand if this means they are equal, or near each other but not equal, sometimes equal or what?

Although applicant's arguments refer to noted "clearly missing elements" examiner could find no mention in the arguments that point out any limitation that is not contained in Kamijo or obvious to one of ordinary skill.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

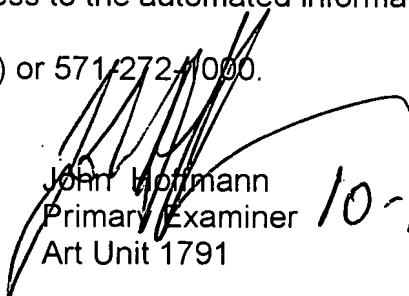
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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


John Hoffmann
Primary Examiner
Art Unit 1791

10-10-07